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ABSTRACT

A study evaluated two El Paso, Texas bilingual education program types, including a state-mandated transitional model (n=18 schools, 5,607 students) and a bilingual immersion program (n=19 schools, 4,717 students). Both programs are designed so students will exit after grade 4, but some continue in grades 5 and 6. Student characteristics are similar across programs. Transitional programs have tended toward the audio-lingual approach, and immersion uses recent language-acquisition methods and the whole language approach and teaches reading and content areas in English. More recently, a language-arts approach has been encouraged, but not widely embraced, in the transitional program. Longitudinal data on student progress in the two program models and process data for three years has been gathered, and teachers were surveyed twice. Analysis of the data indicates that as in previous years, the immersion students performed better on standardized tests than transitional program students, with the gap narrowing in reading and math in the upper grades. Regardless of program, the students make the same average grades and are promoted at a similar rate. It is concluded that the bilingual immersion program can provide needed first-language instructional support and development as well as a richer, faster, more complete exposure to English. (MSE)

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Integrating Whole Language with a Sheltered English Curriculum: a Longitudinal Evaluation of At Risk Language Minority Students

The National Reading Conference
November 27-December 2, 1990
Miami, Florida

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Program Setting

El Paso, Texas is a city of rich cultural heritage and diversity, a city where widely different peoples have met and grown to be interdependent upon one another. Located in the far west corner of Texas, the city is bounded along one side by the country of Mexico and its great city, Ciudad Juarez. El Paso's population is approximately 500,000; that of Juarez estimated to be between one and two million.

The El Paso Independent School District (EPISD) has an enrollment of 64,000 students of whom 72% are Hispanic. It is the fourth largest district in Texas, exceeded only by Houston, Dallas and Fort Worth. It is also one of the poorest urban districts, with a property tax base that is only 55% of the state average. In 1988-89, 57% of the district's students participated in the free/reduced lunch program.

As a result of our cultural heritage and proximity to Mexico, the district has a large limited English proficient (LEP) population. Some of these LEP students come from established resident families, others are legal immigrants or illegal aliens. Our job as a district is not only to teach reading, writing, mathematics, career and social skills, but also the English language. Since the 1970's we have had one of the most extensive bilingual education/ESL programs in the state, with approximately 13,000 students participating each year.

Although only 25% to 30% of the program students were born outside the United States, most come to school with little or no English. Upon entry to the program, the majority make the lowest score possible on an oral English test. Most are very poor. This year approximately 90% received free/reduced price lunch.

These students have the potential to become dropout statistics. Their poverty, language needs, and lack of American acculturation put them at risk of becoming part of the huge Hispanic dropout rate we constantly read about. Compared to national figures, our district is doing a good job of educating students and keeping them in school. Part of that success has to be due to our bilingual programs.

The Programs: SB 477 and Bilingual Immersion

For the past six years, two bilingual education programs have been in place in the El Paso Independent School District. One is the state-mandated program known as SB 477--Senate Bill 477. It follows the transitional bilingual education model where students learn to read in Spanish and later transfer to reading in English. Content areas of mathematics, science and social studies are also taught in Spanish at beginning levels.

The other program is the Bilingual Immersion Program (BIP). BIP students learn to read in English and receive content area instruction in English through a unique blend of non-threatening language acquisition approaches. BIP is a bilingual program--students receive instruction in both English and Spanish--but Spanish receives less emphasis than in the SB 477 program.

The following table shows the percent of students enrolled in each grade level. Both programs are designed so that most students should exit at the end of grade 4. However, SB 477 students may exit earlier if they meet test score cut-offs for exit. This is the probable reason for the drop in SB 477 enrollment in grade 4. A small number of students in both programs exit at all grade levels because their parents do not want them to continue in bilingual education.

Percent of Students in Each Grade Level

	SB 477	BIP
Grade 1	26%	25%
Grade 2	23%	22%
Grade 3	21%	23%
Grade 4	17%	21%
Grade 5	12%	8%

When BIP was implemented as a pilot project, campus principals were allowed to choose between SB 477 and BIP. No data are available on the reasons for their choices. As it worked out, most of the southside, "barrio" type campuses chose to stay with SB 477. There are, of course, some SB 477 campuses located throughout the district as well. BIP campuses are rather evenly spread throughout the district with about half of them in a lower-income, central area of the city. Although students in both programs come from homes where little or no English is spoken, BIP students have a better chance of being exposed to English in neighborhood homes and stores.

The table on the following page displays a comparison of some general demographic data about students in the two programs.

	SB 477	BIP
Number of campuses	18	19
Number of students (Grades PK-6)	5,607	4,717
% of students born in Mexico	33%	27%
% of students on Free/ Reduced-Price Lunch	96%	93%
% of students entering the Bilingual Program in:		
PK or Kindergarten*	67%	74%
First*	14%	12%

*Based on figures from 1988-89

The figures indicate that there are many similarities between the two groups. Although fewer BIP students were born in Mexico, the free/reduced-price lunch figures show that the great majority of students in both programs come from poverty-level families. In addition, more than 80% of the students in both programs entered the bilingual program no later than first grade. All of the students in both programs have a home-language survey that indicates that a language other than English (Spanish in almost all cases) is the primary language of the child and/or the home.

Program Methodologies

Several years ago there were a number of major, discernible differences between the BIP and SB 477 programs. SB 477 leaned toward the audio-lingual approach, was heavily grammar/phonics based and taught students reading and the content areas in Spanish. BIP used recent language-acquisition methodologies, applied the whole language approach and taught reading and the content areas in English. The natural approach and other language-acquisition methodologies have gradually replaced the audio-lingual approach in SB 477. A couple of years ago, the concept of English as a Second Language (ESL)--largely oral language development--was replaced by English for Speakers of Other Languages (ESOL). ESOL is more of a language arts curriculum, incorporating reading and writing in English as well as speaking and listening. Whole language activities have been introduced to SB 477 as well.

Classroom observations carried out for the 1987-88 report indicated that at that time the changes had not been overwhelmingly accepted by SB 477 teachers. Some teachers still may not be comfortable with the strategies and the less-structured, more

student-oriented atmosphere that is necessary to implement an integrated approach. In spite of these factors, the programs are definitely growing closer together in instructional approach. For example, the teacher survey discussed in this report indicated that 50% of the SB 477 teachers had done some integration of social studies into other areas of the curriculum and 34% had regularly used thematic units.

The language used for instruction still provides one line of demarcation for the two programs. In SB 477, the transitional bilingual education approach is still in use. Students learn to read in Spanish in first grade. They practice their written and spoken English skills in ESOL and even do some reading in English. But the majority of the day's instruction and interaction is in Spanish. Content areas--math, science and social studies--are taught in Spanish. The majority of the students meet program criteria at the end of third grade and transfer to reading in English; a few are not ready until the end of fourth. Sample data gathered for this report indicate that some students are remaining in the program in fifth grade, some even into sixth.

In contrast, not only do BIP students receive instruction in Spanish, but they are also introduced to a great amount of English instruction from the very first day of first grade. This English instruction is done in a very creative and non-threatening way--it is not submersion.

A second major difference between the programs was alluded to in the discussion of SB 477 above. Students in both programs enter the program according to state guidelines; SB 477 also follows state guidelines for exit while BIP does not. This means SB 477 students must meet norm-referenced test score cut-offs in order to exit. Although state law allows for alternative placement of LEP students after a prescribed amount of time in bilingual education, the law also allows students to stay in the program until they meet exit criteria. This is why many SB 477 students in our sample are still in the program after five years.

BIP is divided into four levels: beginning, intermediate, advanced and transitional. The students remain at each level for one school year. First grade students are placed at the beginning level and progress through the other levels until they are mainstreamed at fifth grade. Students entering the program in other grades are placed into a level based on previous schooling. Exit from the program is based on completion of the four levels, not on test scores.

The Longitudinal Study

From the beginning of the dual-program situation, the district has gathered information about the progress of students in both programs. For two years, 1984-85 and 1985-86, the district carried out process-oriented evaluations of the programs. These evaluations focused on program implementation: use of strategies,

materials, prescribed language and time allotments. The reports indicated that the programs were generally being implemented as planned.

The 1986-87 report, which contained product information for the first time, showed that students in both programs were experiencing success in becoming proficient in English. In most areas, BIP students outscored SB 477 students--particularly in reading and language arts.

The collection of process data was continued for the 1987-88 report. Observations were carried out in classrooms in both programs in grades 1, 2 and 3 and in BIP in grade 4. The report included test scores on both a norm-referenced and a criterion-referenced test for all students in the programs who had test scores. But it also contained a great deal more information about a carefully selected sample of students--including mobility rates, exit status, grades, retention rates, and test scores.

The 1988-89 report was the first one that did not contain process data. No major program changes were implemented during the school year, and we felt that after four years of observing the programs, we could be fairly certain that they were being implemented as observed in the past. We continued to follow our sample of students--looking at their test scores, grades, and a teacher and parent survey. The report also included test score data for all students in the programs that year.

The 1989-90 report contained test score data for all third and fourth graders in the program who took the tests. It also reported on a teacher survey sent to all SB 477 and BIP teachers in the district. In addition, it included more detailed information about the status and achievement of students in the sample group which has been tracked for three years.

A New Approach--Bilingual Immersion

As the tables on the previous page show, students in the BIP program are surrounded by English--they spend more than twice as much time in English as students in SB 477. Interviews with classroom teachers indicate that teachers feel that this greater exposure to English--especially in the content areas--is very beneficial to students.

The BIP program consists of three major components: Native Language Cognitive Development (NLCD), English Language Arts (ELA), and sheltered content area instruction in English. Each component is independent of the others, but all are mutually supportive and have certain objectives in common.

The objective of NLCD is to develop concepts, literacy, cognition and critical thinking skills in the student's first language. It is during this component, usually the first period of the day,

that instruction is entirely in Spanish. This is particularly important in beginning levels but in all grades, the more demanding critical thinking skills and content area concepts are introduced during this period. This component is what sets Bilingual Immersion apart from most other immersion programs.

In ELA and sheltered content area subjects, students are immersed in an English speaking environment of meaningful and comprehensible student-oriented language. How is this done without making the child feel insecure and "lost" in a language environment that is initially foreign to him?

First, as mentioned above, students receive initial instruction in Spanish. The NLCD portion of the curriculum is placed at the beginning of the day. Throughout the day, whatever is learned in Spanish or English is reinforced through the thematic unit approach.

Second, all instruction is done in the context of the natural approach to second language acquisition. This approach operates on the following assumptions:

1. Comprehension precedes production

2. Production of the new language emerges in stages

3. Context is developed through topics, not isolated skill exercises

4. A low-anxiety environment is provided

Two first grade BIP classes were observed on several occasions during the 1989-90 school year. Most of the children in the classes completed Kindergarten, many Prekindergarten as well. Although most of the instruction was in Spanish, they were also exposed to English during the ESL period. Upon entering first grade, most of the students were in what the natural approach calls either the silent period or early production stage. They understood a great deal of what was said in English. They had learned letters, colors and numbers in English and could follow many classroom instructions in English.

When asked a question in English, most still responded in Spanish. They usually understood what the teacher was asking but either didn't have the vocabulary to reply or weren't comfortable yet in speaking the English words. This was totally acceptable. There was no pressure for them to speak. When the children didn't understand something the teacher amplified, explained or translated in Spanish.

Reading and writing are fostered in BIP through the use of the whole language approach by providing a literary environment and utilizing strategies such as storytelling, daily journal writing, and group and individual publishing. Reading is initiated

through the use of the language experience approach instead of a phonics-based program. The common objectives of ELA, NCLD and the content areas are taught through the use of a unifying theme approach.

Classroom Observations

How does this work in the classroom? Following are portions of notes taken during observations from a first grade BIP classroom. As can be seen from the observation, holidays are natural subjects for thematic units and language experience activities. Although the activities included here took place during the English portion of the day, other observations showed that the same kinds of activities were done during the NLCD component.

December 7 English Language Arts (ELA)

Students had just finished some independent math activities and were sitting on the floor in pairs. They chatted in Spanish as they were putting things away and getting ready for the next activity. The teacher asked students what subject they had been talking about. They chorused "Christmas" (after a more detailed answer--Santa Claus). Mrs. A. asked the students to name items having to do with Christmas that they had discussed. They listed: elf, presents, Mrs. Claus, Santa Claus, Christmas tree, sleigh, reindeer, Santa's bag and Christmas itself. Mrs. A. held up a cut-out of a wreath and asked students what it was. They chorused "corona". She said in Spanish, "Yes, in Spanish it's a corona, but in English it is called a wreath." She said after reading a story they would talk about the wreath and add a page to their big book about Christmas.

The class then read a predictable book--One Cold Wet Night. They read in unison, with and without the teacher, boys vs girls. Most students knew it well; others mimicked classmates. Then the teacher read a book titled Christmas Joys. Mrs. A. named the author and illustrator--then asked children what author and illustrator meant. Students responded, "the one who wrote the story," and "the one who made the pictures." At one point a student asked, "Que son (what are) 'stockings?'" and the teacher told him what they were and said they would discuss them tomorrow. During this activity, students added their comments in Spanish.

After finishing the book, the teacher reviewed, both by group and individually, some of the sightwords students had learned--about 20 at least. Some were words that must be on any sightword list--the, these, have, on, in--while others had come from the language experience activity--Mrs. Claus, Miss, Mr., sleigh.

Students then read the big book about Christmas that they had "written." As a group, and many on their own, did very well

in reading the seven pages drawn from language experience activities in the thematic unit. Some sentences had fairly long words in them. For example, "Santa Claus has a mustache and a beard." (mustache and beard were drawn, not written out) "The Christmas tree has lights and decorations." (again pictures replaced words)

Now they were ready to work with the concept of "Christmas wreath." The teacher asked, "What can you tell me about the Christmas wreath?" Students volunteered (in English) the following sentences. (Remember, until today they didn't know the English word for wreath.)

The Christmas wreath has a bow.
The Christmas wreath is round.
The Christmas wreath has red berries.
The Christmas wreath is green.
The Christmas wreath hangs on a door.
The Christmas wreath says, "Merry Christmas."

The teacher wrote these sentences on chartpaper. Once the sentences were written, the students pointed out sightwords they knew. These were underlined in a certain color. Then the teacher reviewed the concept of nouns. Mrs. A. asked students to name nouns. They came up with a long list including (in English), farmer, fireman, Norma, Mrs. Claus, crown, and car. Then they went through the dictated sentences and underlined the nouns with a different color. (Each student had copied teacher's sentences from chartpaper on their own "book." So they did the underlining too, on their own copy.) After this, students chorally and individually (volunteers only) read the new page in their Christmas book. Then they began illustrating their individual page about the Christmas wreath.

Several of the BIP concepts discussed earlier were seen in this observation. The environment was rich with printed materials. Students not only were constantly read to, they also read and wrote themselves. The language experience activity which they did with the Christmas wreath drew upon their own experience while linking it to new English words. Because the thematic unit approach was used, the vocabulary was not controlled. A mini-lesson on nouns was also included with the activity. The BIP approach does not ignore the teaching of conventional grammar and spelling--but it is done in the context of literary events, not as isolated activities.

Another facet of the BIP approach could be seen in this observations--the accepting of the language which children offer, whether in English or Spanish. Although it was an English activity, students often responded in Spanish. These responses were accepted by the teacher. Usually she answered in English, but at times she clarified a concept in Spanish.

This example shouldn't give the impression that Spanish and English are used in a careless fashion in this program. Students are encouraged to speak and write English during the English portion of the day and Spanish during the Spanish portion. But these children are in the process of learning a second language and as a part of that process they are allowed to speak in the language they are comfortable with.

Some have questioned whether this interchange of languages might be confusing to the students. Whenever BIP teachers have been asked this question they have said it is not a problem. During the 1989-90 school year we interviewed 59 former SB 477 and BIP students who had been in bilingual education for at least three years and exited at the end of fourth grade. One of the questions we asked them was, "When you started school in first grade, you were in a class where the teacher taught part of the day in English and part in Spanish...How did you feel about learning in both English and Spanish?" Forty-five (76%) of the students said that being in a bilingual program had been a very positive experience. Only six students (all from one SB 477 school) said that they had found it confusing to learn in two languages.

Teacher Survey

This past year we replicated a survey that had been sent to BIP and SB 477 teachers three years ago. At that time, BIP teachers responded much more positively about their program than SB 477 teachers. BIP was still a fairly new program and we wondered how the results would hold over time.

The 1989-90 return rate was not as high as it had been previously. However, the number and intensity of teacher comments indicated that there was a lot of interest in the topics addressed. The open-ended questions which were added to the questionnaire generated some very strong opinions, particularly from the SB 477 teachers. The table on the following pages displays teacher responses from both 1986-87 and 1989-90. The five-point Agree/Disagree scale has been collapsed: ratings of 1 or 2 (Disagree) and 4 or 5 (Agree) are shown on the table. Ratings of 3 (indicating an undecided or unsure response) are not shown.

RESPONSES TO TEACHER QUESTIONNAIRE

Responses From BIP Teachers (N = 134)	Disagree	Agree	Agree	Disagree	Responses From SB 477 Teachers (N = 173)
Most students will succeed in the regular program after they complete BIP.	9%	73%	45%	30%	Most students will succeed in the regular program after they complete SB 477.
The BIP program motivates students to learn English.	9%	79%	35%	43%	The SB 477 program motivates students to learn English.
The program develops and maintains students' Spanish language skills.	6%	78%	72%	11%	The program develops and maintains students' Spanish language skills.
BIP is successful in teaching children to read in English.	10%	69%	79%	8%	SB 477 is successful in teaching children to read in Spanish.
(applies only to SB 477			45%	32%	Most students in the program successfully transfer to reading in English.
The BIP program successfully develops students' oral English skills.	10%	74%	36%	38%	The SB 477 program successfully develops students' oral English skills.

Responses From BIP Teachers					Responses From SB 477 Teachers
	Disagree	Agree	Agree	Disagree	
This program motivates students to read and enjoy stories.	8%	80%	48%	23%	This program motivates students to read and enjoy stories.
BIP successfully develops students' grammar, punctuation and spelling skills.	16%	58%	56%	24%	SB 477 successfully develops students' grammar, punctuation and spelling skills.
Students in the program benefit from being taught the content areas in English.	4%	86%	56%	27%	Students in the program benefit from being taught the content areas in Spanish.
The BIP program encourages students to identify positively with their cultural heritage.	5%	70%	69%	15%	The SB 477 program encourages students to identify positively with their cultural heritage.
This year I often integrated the social studies basal into other areas of the curriculum.	10%	64%	49%	21%	This year I often integrated the social studies basal into other areas of the curriculum.
Thematic units were regularly used in my classroom this year.	14%	63%	31%	34%	Thematic units were regularly used in my classroom this year.

In general, BIP teachers responded even more positively about the program in 1989-90 than they did in 1986-87. The only area where there was a slight loss of confidence concerned the development of students' grammar, punctuation and spelling skills. This concern came out in teacher's open-ended comments as well. The interesting thing about this is that BIP students continue to score very well on language skill areas on standardized tests--better than SB 477 students, and often close to district performance.

The table shows that SB 477 teachers were far less positive about their program than BIP teachers. But they were slightly more positive than in 1986-87. A couple of exceptions were those items dealing with oral English skills and motivating students to read and enjoy stories. On these teachers were more negative.

The most interesting part of the questionnaire results were the responses SB 477 teachers gave to the open-ended questions about the program's greatest strength/greatest weakness.

SB 477 teachers overwhelmingly cited the use and development of the Spanish language as the program's greatest strength. They gave several reasons for their choice: students feel at ease and unintimidated; students keep up in content areas while learning English; they identify with their heritage. But 65 teachers (38% of the respondents) claimed that the emphasis on Spanish was the program's greatest weakness. In a number of cases teachers gave "Spanish" as both the greatest strength and the greatest weakness. Many reasons were given for the concern about Spanish including: students are being held back, Spanish is used as a "crutch," children are not motivated to learn English. The intensity of the comments indicated a great deal of strong emotion surrounds this issue. Whether dealing with this issue or others, SB 477 teachers' comments about the program were generally more negative than BIP teachers' comments.

BIP teachers' comments were not only more positive, they were broader. About a quarter of them praised the program's emphasis on English as its greatest strength. Others cited the Spanish component, the whole language approach and the emphasis on literature. When it came to naming the greatest weakness, the most common complaint was that the program lacked structure.

Teachers meant different things by the word structure. Some were referring to the fact that the program's flexibility allowed teachers to "do their own thing." They wanted greater uniformity and conformity to the program. Others wanted structure in the form of basal texts, and scope and sequence. Often, teachers expressed an insecurity about their ability to make curricular choices, even on a small scale. Of course this flexibility is the very thing that many BIP teachers love about the program. This insecurity is also an interesting phenomenon in today's

educational environment where so many are calling for teacher empowerment and site-based management.

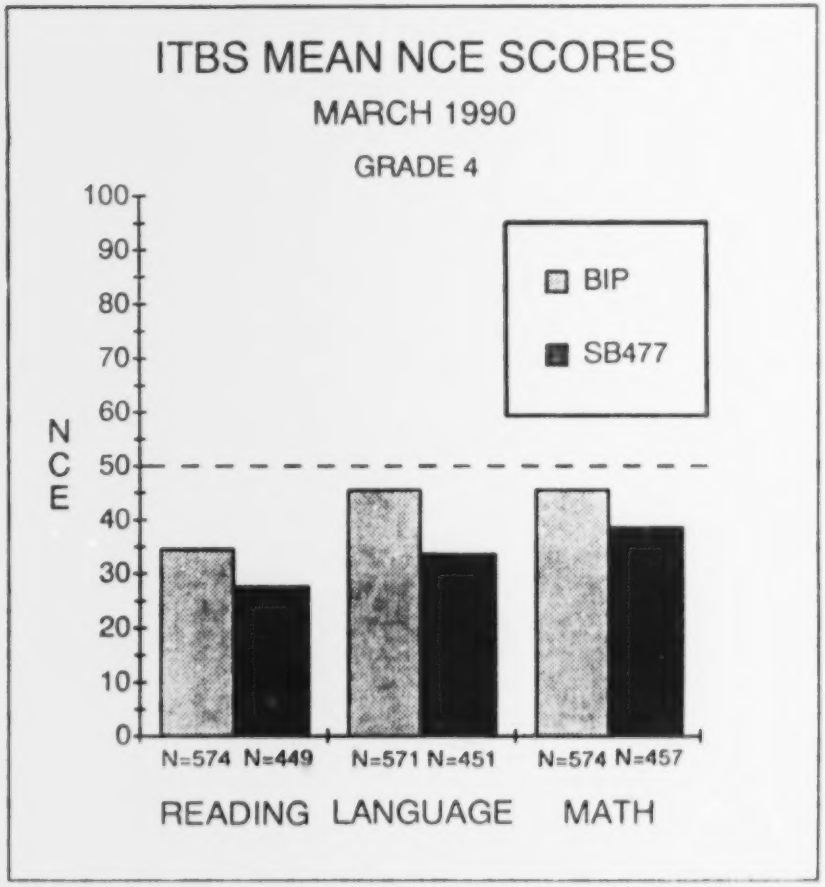
Standardized Test Scores

Since 1986-87 test scores on the Texas Educational Assessment of Minimum Skills (TEAMS) and the Iowa Tests of Basic Skills (ITBS) have been collected and analyzed for all students taking the tests in each program. Every year BIP students have consistently scored higher than SB 477 on both tests. This year was no exception. The chart on the following page displays the results of the 1989-90 ITBS for fourth grade, the grade when the largest number of students in both programs take the tests (many are exempt at lower grades because of limited English proficiency).

Iowa Tests of Basic Skills (ITBS) Mean NCE Score
March 1990

GRADE 4	BIP N = 574	SB 477 N = 457	Difference Significant at .05 Level?
Vocabulary	33	25	Yes*
Reading	**35**	**28**	**Yes***
Spelling	36	26	Yes*
Capitalization	51	40	Yes*
Punctuation	58	46	Yes*
Usage	41	32	Yes*
Language Total	**46**	**34**	**Yes***
Math Concepts	50	43	Yes*
Math Problems	39	32	Yes*
Math Computation	52	48	Yes*
Math Total	**46**	**39**	**Yes***
Complete Composite	39	29	Yes*

*Significant at the >.0001 level



The table and chart show that BIP students scored higher than SB 477 students on every ITBS subtest. With the exception of Math Computation, there was at least a seven NCE difference between average scores in the two programs. On Punctuation and Language Total the difference was 12 NCEs. Three years ago, BIP also scored higher than SB 477 on every subtest but the differences between the two groups were smaller--averaging around five NCEs.

When we look at growth within the programs we also see a difference. From 1987-88 to 1989-90, BIP fourth grade scores averaged gains of three to five NCEs. In contrast, SB 477 scores rose only one NCE on two subtests, remained the same on seven, and went down one NCE on two others.

Because we are looking at the whole population, caution must be exercised in drawing conclusions from these differences. Many unknown factors exist in large school districts which are often hard to pin down. Perhaps there have been changes in the SB 477 population that have not affected BIP. Perhaps changes in how students are exempted from the tests have influenced testing outcomes. More research needs to be done in order to determine the reasons for the differences.

LEP Student Sample

During the 1987-88 school year a sample of students in each program was chosen to follow over time. Fourth grade students were chosen for the sample from five schools in each program which had large eligible populations. Criteria for eligibility included: entering bilingual education in grade K or 1; and remaining in the same program (not necessarily the same school) through fourth grade.

This past year (1989-90) was the third year of tracking the sample population. A major reason for choosing a sample was to see how students would do once they exited the bilingual program and entered regular classes. One of the things we have learned from the sample is how long some students are remaining in SB 477. Some students who entered bilingual education in grade 1 were still in the program in grade 6. One reason for this is that the state has set standardized test score guidelines for exit which some students have not been able to attain. Other students remain in the program because campus administrators do not exit them. When we first selected the sample, we thought that by fifth grade both groups would be in regular classes and therefore be comparable. However, 1990-91, seventh grade for most of the sample, is the first year that all of the students in both program groups will be in regular classes.

As we have followed the two groups we have found a couple of areas where there is very little difference between them. One is in the way they have been promoted through the grades. The

following table shows that the same percentage of students have been retained or placed up in both programs.

1989-90 Grade Level

	Grade 5		Grade 6		Grade 7	
	Number	%	Number	%	Number	%
BIP	12	9%	120	90%	2	1%
SB 477	13	9%	131	90%	1	1%

Another area where the groups appear to be the very similar is in classroom grades. Students' grades for language arts, social studies, science and mathematics have been collected for the past four years. In both programs the average grade in all four of these courses has hovered around 80. In some cases, SB 477 has averaged one point higher than BIP or vise-versa with no discernible pattern.

This year the grades were looked at from a different angle--the percent passing each subject. In language arts, social studies and science, three to five percent more BIP students made passing grades than in SB 477. In mathematics, seven percent more BIP students made passing grades. At this time we don't know whether these differences are meaningful or not.

Earlier in this paper we reported that BIP students almost always scored higher than SB 477 students on standardized tests. This trend still held true in most areas for the sample students this year. The table on the following page displays a comparison of students' 1989-90 ITBS scores.

Sample Students

ITBS 1989 Mean National Percentiles

GRADE 6	BIP N = 115	SB 477 N = 125	Difference Significant at .05 Level?
Vocabulary	15	13	No
Reading	**23**	**21**	**No**
Spelling	36	31	No
Capitalization	39	31	Yes
Punctuation	55	42	Yes
Usage	33	26	Yes
Language Total	**39**	**30**	**Yes**
Math Concepts	48	44	No
Math Problems	29	28	No
Math Computation	42	52	Yes
Math Total	**39**	**40**	**No**
Complete Composite	26	22	No

There is little difference in the reading scores. However, the BIP lead in language scores which we see in the whole population at grades 3 and 4 is still apparent here. Math scores were mixed. BIP students did slightly better on Math Concepts and Math Problems, but scored much lower on Math Computation.

These national percentile scores give a snapshot of how students did last year. The table on the following page will look at their growth over time using grade equivalent scores. These scores are displayed as one-decimal-place numbers with the whole digit representing the grade level year and the decimal representing the month.

The scores which follow are not from matched cases. They represent all the students in the sample in the grade level displayed. For example, only those students who were in sixth grade in 1990 are shown--retainees who stayed in fifth grade are not included in the 1990 groups. This loss of the retainees slightly inflates the grade equivalents of the group from year to year.

ITBS Mean Grade Equivalent Scores

	MATH		READING		LANGUAGE		Expected Average
	BIP	SB 477	BIP	SB 477	BIP	SB 477	GE
1987	3.4	3.3	2.9	2.5	3.7	3.4	3.7
1988	4.4	4.2	3.5	3.2	4.4	3.7	4.7
1989	5.4	5.3	4.5	4.2	5.3	4.9	5.7
1990	6.2	6.3	5.3	5.2	6.1	5.7	6.7

The table shows that students have lost ground in reading and language. In 1987, students in BIP were only six months behind the norm group in reading, on grade-level in language. In 1990, the BIP group was six months behind in language and more than a year behind in reading. SB 477 students have also lost ground.

We don't know why students haven't continued to make gains at the rates they did in the primary grades. One possibility is the change in instructional strategies that begins to occur in grade 4. Observations carried out earlier in the the longitudinal study indicated that BIP teachers in grades 1-3 were more likely to use an integrated language approach based on thematic units. Upper grade BIP teachers expressed concerns about students not "learning skills." They tended to spend more time on traditional drill-and-practice activities. Once students leave BIP, they are placed in regular classes, where integrated, whole language approaches to reading and language instruction are rare.

One thing to keep in mind here is that all but one of the BIP students were in a regular program in 1989-90, while 35% of the SB 477 students were still in the bilingual education program. This factor may have an effect on students' achievement. Classes in the bilingual program are limited in size and teachers are usually aware of the needs of second language learners. Regular classes are larger and teachers do not always know that students have come from a bilingual program or adjust what they are doing in response to students' needs.

We decided to look at one more variable which might be affecting students' achievement: the level of school students attend. Some students in the sample attended attended a middle school this year for the first time; others attended sixth grade at elementary schools. This was due to the way district schools are organized--not students choice. The tables on the following pages compare the gains of students in each program who attended elementary schools with those who attended middle schools.

BIP

Students who Transferred to Middle Schools after Grade 5

	ITBS GE's 1989-90 Grade 6 N=68	ITBS GE's 1988-89 Grade 5 N=71	Months Gain Grade 5 to Grade 6
Vocabulary	5.0	4.4	+6
Reading	5.5	5.0	+5
Spelling	5.9	5.1	+8
Total Language	6.2	5.6	+6
Total Math	6.3	5.9	+4
Complete Composite	5.8	5.3	+5

Students who Stayed in Elementary Schools after Grade 5

	ITBS GE's 1989-90 Grade 6 N=46	ITBS GE's 1988-89 Grade 5 N=48	Months Gain Grade 5 to Grade 6
Vocabulary	4.5	4.3	+2
Reading	5.1	4.7	+4
Spelling	5.9	4.9	+10
Total Language	6.0	5.3	+7
Total Math	6.1	5.3	+8
Complete Composite	5.5	4.9	+6

SB 477

Students who Transferred to Middle Schools after Grade 5

	ITBS GE's 1989-90 Grade 6 N=49	ITBS GE's 1988-89 Grade 5 N=51	Months Gain Grade 5 to Grade 6
Vocabulary	4.4	4.2	+2
Reading	**4.9**	**4.8**	**+1**
Spelling	5.2	5.1	+1
Total Language	**5.2**	**5.5**	**-3**
Total Math	**5.8**	**5.6**	**+2**
Complete Composite	5.2	5.1	+1

Students who Stayed in Elementary Schools after Grade 5

	ITBS GE's 1989-90 Grade 6 N=76	ITBS GE's 1988-89 Grade 5 N=79	Months Gain Grade 5 to Grade 6
Vocabulary	4.8	4.4	+4
Reading	**5.4**	**4.9**	**+5**
Spelling	5.9	4.9	+10
Total Language	**6.0**	**5.5**	**+5**
Total Math	**6.6**	**5.6**	**+10**
Complete Composite	5.7	5.2	+5

The tables show that for BIP students there was very little difference between the elementary school and middle school groups. However, gains were higher for SB 477 students who stayed at elementary schools in grade 6. This phenomenon may be related to some other factor than the level of the school stu-

dents attend. It may have to do with the fact pointed out earlier--a number of the SB 477 students who stayed at elementary schools in grade 6 were still in the program.

Conclusions

This year the data once again indicate that students in the Bilingual Immersion Program score higher on standardized tests than students in SB 477, the state-mandated program. Longitudinal sample data indicate that the test score gap between the two programs may be narrowing in reading and math as students approach junior high. However, BIP students in the sample still consistently score higher on language tests.

Other data indicate that regardless of which program the students have been been in, they make about the same average grades and are promoted through the grades at about the same rate. However, this past year, more BIP students in the sample passed their classes than SB 477 students.

This year (1990-91) will be the first year that all or nearly all of the students in the sample will be in regular program classes. It will be interesting to see how the two groups compare at the end of the year.

The implications of these findings could be important to policy makers. BIP provides a truly bilingual setting--instruction in both Spanish and English--yet it gives students more exposure to English than they receive in a transitional bilingual education setting. As Collier pointed out in an article about the rate of second language acquisition, learning a second language is a lengthy and complex process (TESOL Quarterly, 1989). Her research indicates that it takes a minimum of four to eight years for advantaged students to reach grade-level norms on standardized tests. Unfortunately, schools don't have unlimited time to accomplish this task. We must do the best we can to enable students to fully participate in school and become part of the mainstream population. Bilingual Immersion seems to be able to provide the instructional support and development in the first language that students need. Simultaneously it seems to give them a richer, more complete exposure to English at a faster rate than transitional bilingual education.

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